



# WATLOW®

*Powered by Possibility*

## ASPYRE®



## ASPYRE®

### To Elevate Your System

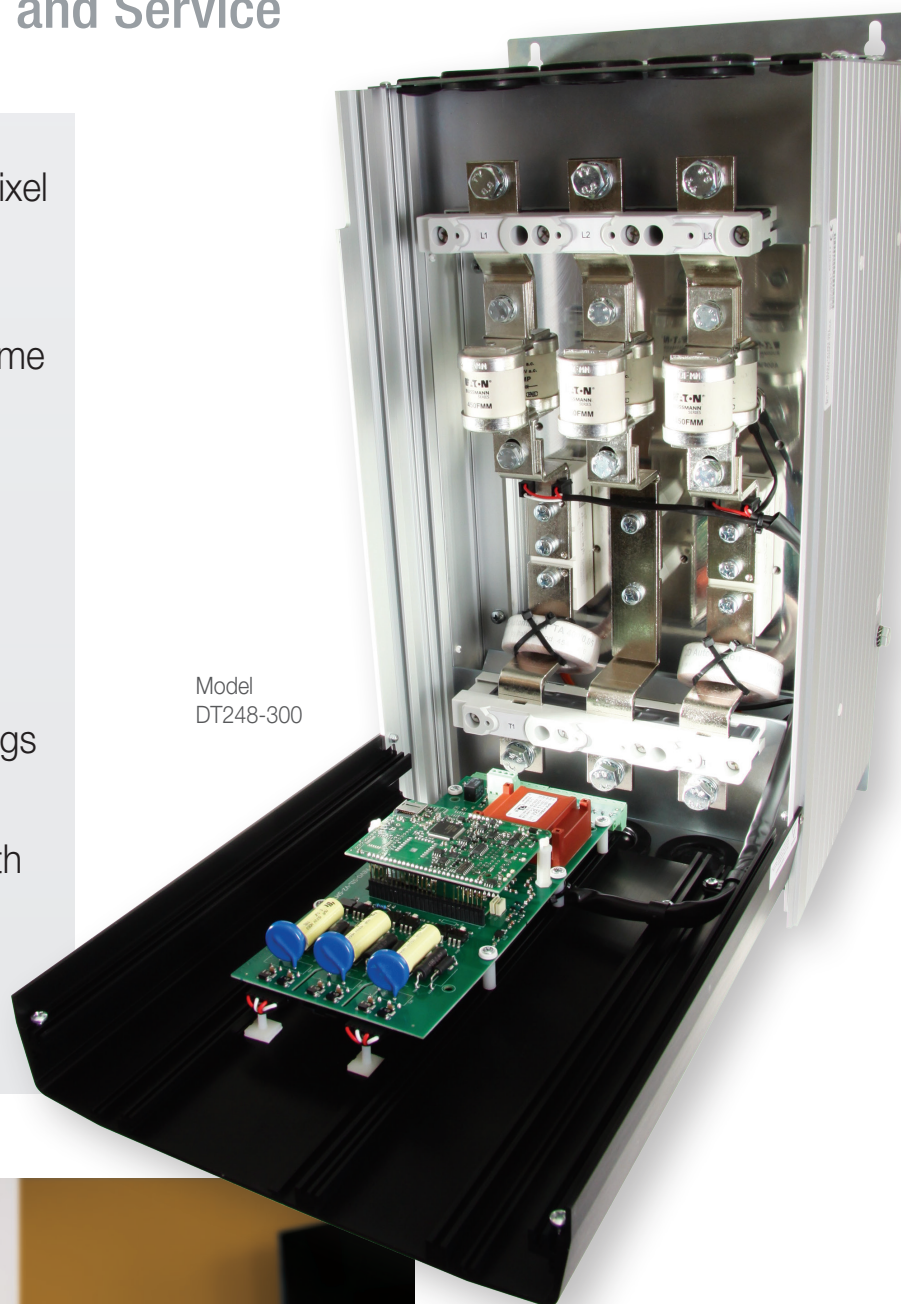
with an intelligent power  
controller family that simplifies  
your application while offering  
cutting-edge features



# Modular and Smart Design

## Easy to Use and Service

- > Easy to read real character pixel display
- > Quick access to SCRs minimizes production downtime
- > Simple to configure with ASPYRE® configuration PC software and plug and play access via USB device port
- > Intuitive application wizard automatically recommends controller configuration settings based on load type
- > Intelligent troubleshooting with built-in diagnostics
- > Easy to access replaceable semiconductor fuses

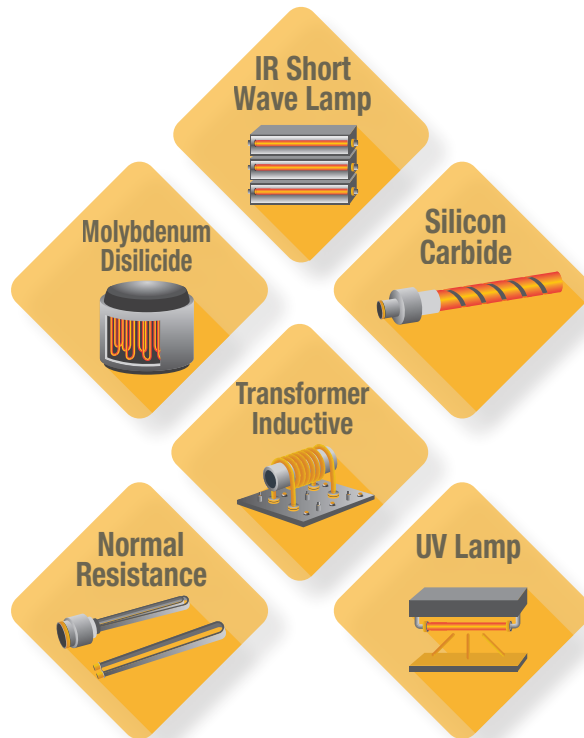


Model  
DT148-060



# Improved Process Control

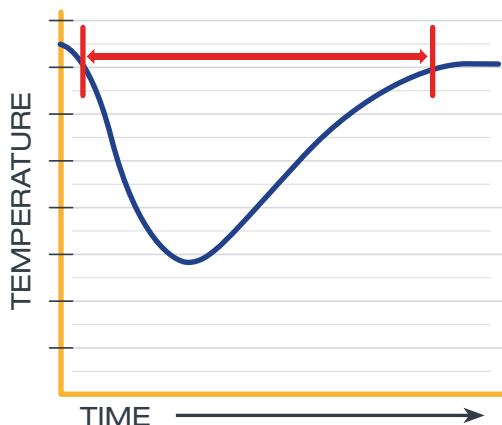
## For a Wide Variety of Load Types



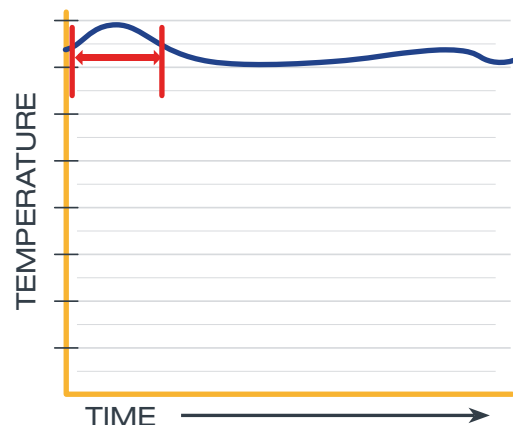
- > 20 firing combinations to align with a variety of load types
- > Advanced control modes protect heater from damage on start up and extends overall heater element life
- > Six available power control modes to maximize thermal performance
- > Multiple digital and analog I/O to increase system control functionality

## Closed-Loop Temperature Control

Without Power Control Feedback



With **ASPYRE** Power Control Feedback



Power feedback can immediately adjust thermal performance to keep temperature constant





# Integrated Functions

## Lower Ownership Costs



Model  
DT348-300

**ASPYRE®**

All the  
functionality of  
multiple devices...  
*in a single  
controller.*

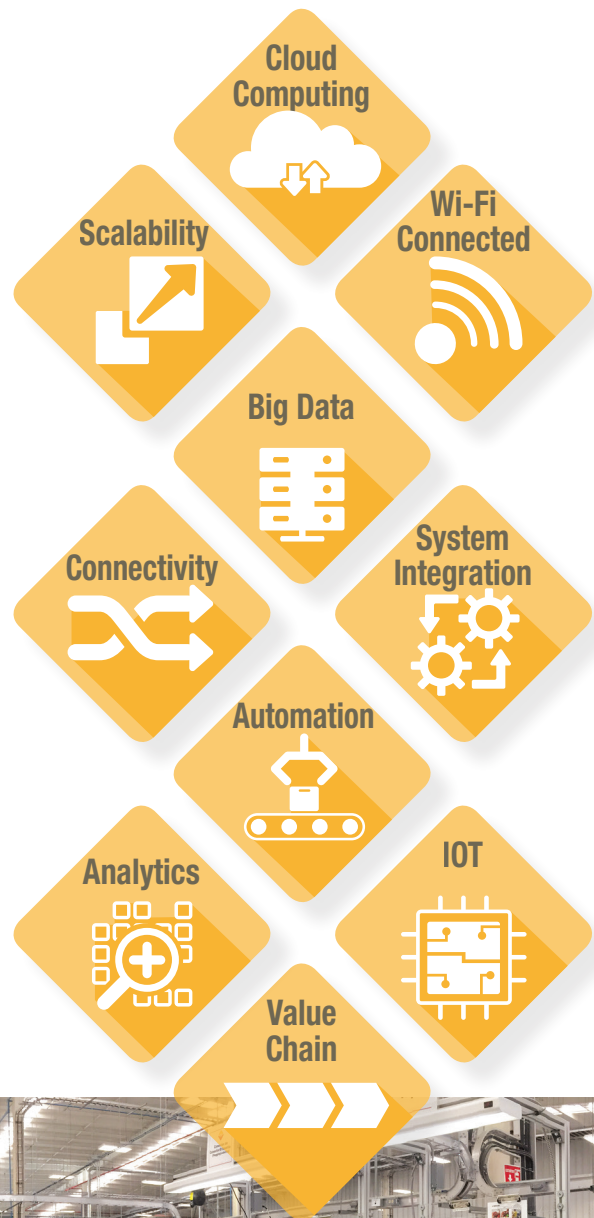
- > UL® 508 rating results in reduced labor and project costs
- > Smaller footprint and less weight than legacy power controllers reduces cabinet space and shipping expenses
- > Integrated design reduces system complexity, inventory and labor to install and wire
- > ASPYRE DT features SCR switching, voltage sensor, data logging, Wi-Fi, current sensor, semiconductor fusing, user interface, communications, relay alarm, cooling fan, back-up power supply and more in one device



# Communication Access to Important Data

## Connectivity for Automation

- > USB device port (file transfers - configuration or data log)
- > Data logging
- > Wireless Wi-Fi and mobile application
- > Communication protocols  
485 Modbus® RTU (up to 2),  
Modbus® TCP, Ethernet IP,  
Profibus DP, Profinet
- > 4-20mA retransmit

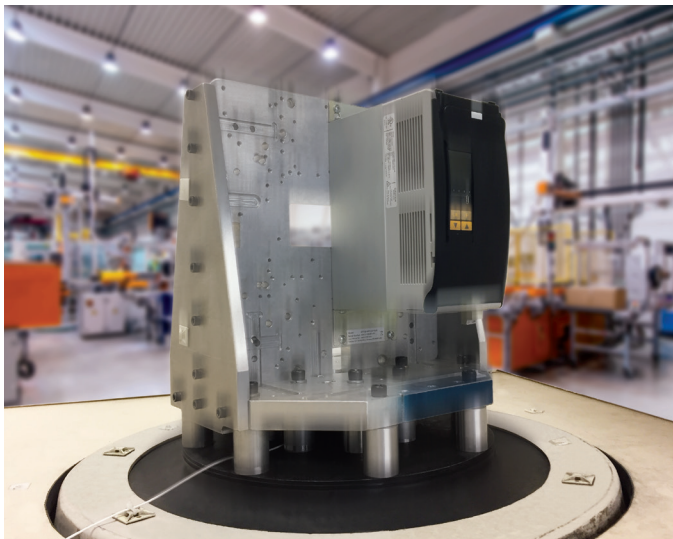




# Industry-Leading Design

## For High Quality and Reliability

### High Performance Validated With Stringent Testing



Shock and vibration testing



Model  
DT248-035

- > 3 year factory warranty
- > Robust SCR design with high  $I^2t$  rating
- > Passes rigorous Watlow test standards
- > Agency compliance - UL<sup>®</sup>, CE, RoHS, W.E.E.E.
- > 100KA SCCR rating
- > UL<sup>®</sup> 508 rating
- > UL<sup>®</sup> 508 shortens project schedules, agency testing and expenses

### Meets or Exceeds Industrial Test Standards

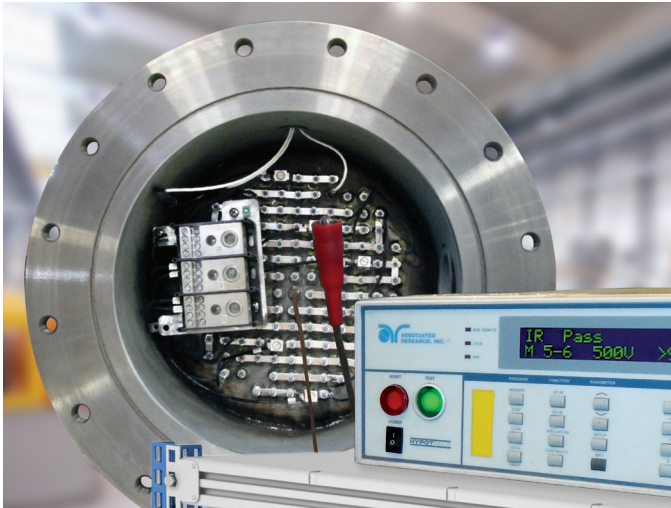
EN 61326	Electrical equipment for measurement, control, and laboratory use - EMC requirements
EN 61326-1	Electrical equipment for measurement, control, and laboratory use - EMC requirements Updated 61000-4-3 to 3 GHz, Updated 61000-4-11 dips test, required by Feb 1, 2009.
EN 61000-4-2	Electrostatic discharge immunity test.
EN 61000-4-3	Radiated radio-frequency electromagnetic fields.
EN 61000-4-4	Electrical fast transient/burst immunity test.
EN 61000-4-5	Surge immunity test.
EN 61000-4-6	Conducted disturbances induced by radio-frequency fields.
EN 61000-4-8	Power frequency magnetic field immunity test.
EN 61000-4-11	Voltage dips, short interruptions and voltage variations immunity test.
EN 55011	Limits and methods of measurement of radio disturbance characteristics of Industrial, Scientific, and medical (ISM) radio-frequency equipment.
EN 61000-3-2	Limits for harmonic current emissions (equipment $\leq 16$ A per phase)
EN 61000-3-3	Limitation of voltage fluctuations and flicker in low-voltage supply systems with equipment with rated current $\leq 16$ A.





# Wet Heater Bake Out

## Protects Heaters on Start-Up



Megohm heater circuit precheck

Reduces start up costs  
and production delays



Watlow process heater bundle

## Megohm Test Procedure

**WATLOW ELECTRIC MFG CO.**

WATROD™ Circulation Heater Installation & Maintenance Manual

I&M NUMBER: 316-42-5-1



Page: 1

Rev: 5.00

### 1. Megohm precheck

During shipping and/or storage, the possibility of absorption by the insulation material within the element is possible. To ensure proper megohm values a minimum 500 VDC megohm (Megger) should be used to ensure that the megohm reading is greater than 10 megohms when the heater sheath is at room temperature.

If several heaters are connected, the megohm of the heater is obtained by the reading divided by the number of connected elements. This reading should be greater than 10 megohms.

If a low megohm value exists, two alternative methods can be used to remedy the situation. The best method is to remove all terminal hardware including thermostat if provided, and bake out the heater at no higher than 250°F (120°C) overnight or until an acceptable reading is reached. The second method is to energize the unit at low voltage in air until the megohm is at an acceptable reading. Care should be taken to prevent the heater sheath





Find out more about Watlow and how we can provide thermal solutions for your company:

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Website: [www.watlow.com](http://www.watlow.com)

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### **Watt Solutions**

Thermal Systems ... Embracing Complexity

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